

Abstracts

181

RESULTS: Under baseline GI complication annual risk assumptions (1.5% for NSAIDs), cost savings for celecoxib (\$10,000 per 100 patients) through avoided GI events were dominated by the additional drug costs (\$66,000 per 100 patients). This relationship held true even when higher costs NSAIDs, based solely on either diclofenac or naproxen, and higher underlying rates of 6% were considered. Cost effectiveness ratios were calculated at \$41,824 per life year gained under baseline conditions. Sensitivity analysis showed, however, that underlying annual risk of GI-related complication had a strong influence on the cost-effectiveness of the COX-2 inhibitors. At 3% per year risk levels, the cost per LYG reduced to \$17,107.

CONCLUSION: The analysis suggests that the coxibs have an attractive cost-effectiveness profile when patients have an underlying annual risk of GI-related complications on NSAIDs of at least 2.5% (equivalent to a patient having at least two recognised risk factors).

PA010

COST-EFFECTIVENESS OF PHARMACEUTICAL TREATMENTS OF FRACTURE IN WOMEN WITH ESTABLISHED OSTEOPOROSIS IN HONG KONG

Zhang JX, Lau E

The Chinese University of Hong Kong, Shatin, NT, Hong Kong

OBJECTIVES: Osteoporosis is a major public health problem in Asia. The objectives of this study were to compare the cost-effectiveness of different pharmaceutical treatments for Hong Kong women with established osteoporosis.

METHODS: We compared the cost-effectiveness of treatments using a decision analytic model based upon Markov process for a hypothetical cohort of women at risk of fractures due to osteoporosis. A cohort of 100,000 postmenopausal women were simulated and followed for 10 years of treatment. The model included a number of scenarios based upon available pharmaceutical treatment alternatives in costs, clinical effectiveness, and time of treatment onset. Sensitivity analyses were performed to test the robustness of results.

RESULTS: Programme costs, economic benefits, and cost-effectiveness ratios varied significantly among different treatments. Calcium and Alendronate are more cost-effective than Calcitonin. Treatment efficiency has significant impact on the overall cost-effectiveness of the programmes. Later time of treatment onset improved the cost-effectiveness across programmes. While discounting and cost assumptions had some impact on the absolute value of cost-effectiveness ratios, they did not change the relative ranks of cost-effectiveness of different treatments.

CONCLUSION: Calcium and Alendronate are more cost-effective treatments. As the population ages and more people are subjective to risks of fracture due to osteoporosis, policy formulating should consider the cost-

effectiveness of the treatment as well as the time of treatment onset.

PA011

COST-EFFECTIVENESS OF VARIOUS TREATMENT STRATEGIES IN POSTMENOPAUSAL WOMEN WITH OSTEOPOROSIS IN POLAND

Orlewska E¹, Lis J²

¹Medical University of Warsaw, Warsaw, Poland; ²Eli Lilly Polska, Warsaw, Poland

OBJECTIVES: To identify and compare the cost-effectiveness of raloxifene, alendronate and nasal calcitonin in the treatment of osteoporosis in postmenopausal women in Poland.

METHODS: Model for the Polish health-care context was developed, based on the use of clinical data from literature and local data of health-care resource utilisation and unit cost. Only the direct medical costs were analysed. The perspective of health-care payers and time horizon of 3 years was considered. The target population were patients aged 68, without (group I) and with or without (group II) previous vertebral fractures. The outcomes measures were LYG and QALYs gained, calculated on the basis of available evidence for a preventive effect on a hip, vertebral, wrist and ankle fractures and breast cancer risk. The cost-effectiveness threshold was calculated on the basis of 1-year haemodialysis treatment cost (60,000 PLN, 1 USD = 4 PLN; in 2002). The one-way and two-way sensitivity analysis was performed.

RESULTS: The highest effectiveness in terms of LYG and QALYs was achieved with raloxifene treatment compared to alendronate and calcitonin. Calcitonin was the least effective and the most costly strategy. Incremental analysis suggests that raloxifene compared with alendronate gives additional effects for extra costs below suggested cost-effectiveness threshold: the ICER was 35023 PLN/LYG and 31023 PLN/QALY gained in group I, and 45834 PLN/LYG and 40571 PLN/QALY gained in group II. Sensitivity analysis showed that calcitonin remained dominated strategy by comparators in all cases. Only raloxifene price and incidence of breast cancer changes have significant effect on the ICER, placing it above the cost-effectiveness threshold.

CONCLUSIONS: Given the results of the analysis, in postmenopausal women calcitonin is less effective and more costly than alendronate and raloxifene. Based on current evidence, raloxifene appears to be cost-effective when compared with alendronate and within a Polish context offers substantial benefit at reasonable cost.